CLAIMS

1. A method of making a pneumatic tire,

said pneumatic tire comprising

a tread portion,

a pair of sidewall portions,

a pair of bead portions,

a carcass extending between the bead portions, and

a belt disposed radially outside the carcass in the tread portion, said belt composed of a breaker and a band disposed on the radially outside of the breaker,

said method comprising

applying a raw breaker material to a cylindrical drum,

spirally winding a plurality of parallel band cords around the raw breaker material on the cylindrical drum so that angles of the windings are not more than 5 degrees with respect to the tire equator, and

gradually increasing one of

(1) an average density of the band cords in the tire axial direction and

(2) an average tension of the band cords in the tire axial direction

from a center portion of the band towards each axial edge of the band during winding the band cords.

2. The method according to claim 1, wherein

the average density Dc of the band cords at a position Pc at the tire equator,

the average density Dn of the band cords at any position

Pn at a certain distance (Ln) from the tire equator,
the radius Rc of the inner surface of the band in the finished tire at the positions Pc, and
the radius Rn of the inner surface of the band in the finished tire at the positions Pn
satisfy the following condition
$Dn = Dc \times (Rc/Rn)$.

3. The method according to claim 1, wherein
the average density Dc of the band cords at a position Pc at the tire equator,
the average density Dn of the band cords at any position Pn at a certain distance (Ln) from the tire equator,
the radius Rc of the inner surface of the band in the finished tire at the positions Pc, and
the radius Rn of the inner surface of the band in the finished tire at the positions Pn
satisfy the following condition
$Dc \times (Rc/Re) < De =< 3.0 \times Dc \times (Rc/Re)$

4. The method according to claim 2 or 3, wherein
said plurality of parallel band cords traverse the cylindrical drum along the axis of the drum, and the traversing speed is continuously changed, while rotating the drum at a constant speed, whereby the average density is gradually increased.

5. The method according to claim 1, wherein
the average tension Tc of the band cords at a position Pc at the tire equator,
the average tension Tn of the band cords at any position

Pn at a certain distance (Ln) from the tire equator,
the radius Rc of the inner surface of the band in the finished tire at the positions Pc, and
the radius Rn of the inner surface of the band in the finished tire at the positions Pn
satisfy the following condition

$$Tn = Tc \times (Rc/Rn).$$

6. The method according to claim 1, wherein
the average tension Tc of the band cords at a position Pc at the tire equator,
the average tension Tn of the band cords at any position Pn at a certain distance (Ln) from the tire equator,
the radius Rc of the inner surface of the band in the finished tire at the positions Pc, and
the radius Rn of the inner surface of the band in the finished tire at the positions Pn
satisfy the following condition

$$Tc \times (Rc/Re) < Te \leq 3.0 \times Tc \times (Rc/Re).$$